



Docket No.: 1454.1509

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the Application of:

Michael CONRADT et al.

Serial No. 10/759,073

Group Art Unit: 2619

Confirmation No. 7154

Filed: January 20, 2004

Examiner: Jeffrey M. Rutkowski

For: METHOD FOR CLASSIFYING NETWORK COMPONENTS OF A PACKET-ORIENTED NETWORK

APPEAL BRIEF UNDER 37 C.F.R. § 41.37

Mail Stop Appeal Brief-Patents
Commissioner for Patents
PO Box 1450
Alexandria, VA 22313-1450

Sir:

In a Notice of Appeal and a Pre-Appeal Brief Request for Review filed May 5, 2008, the applicants appealed the Examiner's January 3, 2008 Office Action finally rejecting claims 1-11. A Notice of Panel Decision from Pre-Appeal Brief Review mailed on June 30, 2008 indicated that the application remains under appeal because there is at least one actual issue remaining for appeal.

Appellant's Brief, together with the requisite fee set forth in 37 C.F.R. § 1.17, is submitted herewith. A Petition for a Second Month Extension of Time, together with the requisite fee, is enclosed, thereby extending the response due date to September 30, 2008.

Should any additional fees be required or an overpayment of fees made, please debit or credit our Deposit Account No. 19-3935, as needed.

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I. REAL PARTY IN INTEREST (37 C.F.R. § 41.37(c)(1)(i))

The real party in interest is Siemens Aktiengesellschaft, the assignee of the application.

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II. RELATED APPEALS AND INTERFERENCES (37 C.F.R. § 41.37(c)(1)(ii))

Appellant, appellant's legal representative, and the assignee do not know of any prior or pending appeals, interferences or judicial proceedings which may be related to, directly affect or be directly affected by or have a bearing on the Board's decision in this appeal.

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III. STATUS OF CLAIMS (37 C.F.R. § 41.37(c)(1)(iii))

Claims 1-11 have been finally rejected and are on appeal.

IV. STATUS OF AMENDMENTS (37 C.F.R. § 41.37(c)(1)(iv))

Appellant has filed no amendments subsequent to the Examiner's January 3, 2008 final Office Action.

Appellant's Pre-Appeal Brief Request for Review filed May 5, 2008 was entered for purposes of Appeal as indicated by the Notice of Panel Decision form Pre-Appeal Brief Review mailed June 30, 2008.

V. SUMMARY OF CLAIMED SUBJECT MATTER (37 C.F.R. § 41.37(c)(1)(v))

Independent claim 1 recites a method (for example, the method illustrated by the flowchart of Fig. 2) for classifying network components (for example, network components G-A, G-B, and G-C in Fig. 1) of a packet-oriented network (for example, IP-oriented network DN in Fig. 1). The method includes determining, from a central management component (for example, central management component M in Fig. 1), whether a network component is a management-capable network component (for example, operations 10 and 20 in Fig. 2). If it is determined that a network component is a management-capable network component (for example, Yes in operation 20 of Fig. 2), the method further includes determining whether the network component supports layer 3 of the OSI reference model and determining whether data packets have already been forwarded in the past between the interfaces of the management-capable network component in order to classify the management-capable network component (for example, operations 40 and 50 in Fig. 2).

Independent claim 10 recites a central management component (for example, central management component M in Fig. 1) that includes an inquiry unit to determine whether a network component (for example, network components G-A, G-B, and G-C in Fig. 1) is a management-capable network component. The central management component M further includes a classification unit to determine whether the network component supports layer 3 of the OSI reference model and to determine whether data packets have already been forwarded in the past between the interfaces of the management-capable network component in order to classify the management-capable network component, if the network component is a management-capable network component.

Independent claim 11 recites a computer readable storage medium storing a computer program to control a processor to perform a method (for example, the method illustrated by the flowchart of Fig. 2) for classifying network components (for example, network components G-A, G-B, and G-C in Fig. 1) of a packet-oriented network (for example, IP-oriented network DN in Fig. 1). The method includes determining, from a central management component (for example, central management component M in Fig. 1), whether a network component is a management-capable network component (for example, operations 10 and 20 in Fig. 2). If it is determined that a network component is a management-capable network component (for example, Yes in operation 20 of Fig. 2), the method further includes determining whether the network component

supports layer 3 of the OSI reference model and determining whether data packets have already been forwarded in the past between the interfaces of the management-capable network component in order to classify the management-capable network component (for example, operations 40 and 50 in Fig. 2).

None of the claims contain an element expressed as a means or step for performing a specified function without the recital of structure, material, or acts in support thereof.

VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL (37 C.F.R. § 41.37(c)(1)(vi))

Claims 1-5, 7-8, and 10-11 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent Application Publication No. 2002/0032761 ("Aoyagi et al."), in view of Management Information Base for Version 2 of the Simple Network Management Protocol ("RFC 1907"), and further in view of Management Information Base for Network Management of TCP/IP-based internets ("RFC 1213").

Claim 6 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Aoyagi et al. as modified by RFC 1907 and RFC 1213 as applied to claim 5, and further in view of U.S. Patent No. 5,651,006 ("Fujino et al.").

Claim 9 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Aoyagi et al. in view of RFC 1907 and RFC 1213 as applied to claim 1, and further in view of Fujino et al.

VII. ARGUMENT

A. Review of the prior art

1. U.S. Patent Application Publication No. 2002/0032761 ("Aoyagi et al.")

Aoyagi et al. teaches a method and system for detecting a physical device configuration inside a network node and displaying the configuration of a network in connection with a plurality of devices, in a network environment including SNMP-implemented intelligent network devices.

2. Management Information Base for Version 2 of the Simple Network Management Protocol ("RFC 1907")

RFC 1907 is a Request for Comments technical paper that merely defines the object "sysServices".

3. Management Information Base for Network Management of TCP/IP-based internets ("RFC 1213")

RFC 1213 is a Request for Comments technical paper that merely defines the object "ipForwDatagrams".

4. U.S. Patent No. 5,651,006 ("Fujino et al.")

Fujino et al. teaches a hierarchical communication network management system that is structured by a plurality of agents and sub-managers connected to lower communication networks and an integration manager connected to a higher communication network.

B. Claims 1-5, 7-8, and 10-11 are patentable over U.S. Patent Application Publication No. 2002/0032761 ("Aoyagi et al."), in view of Management Information Base for Version 2 of the Simple Network Management Protocol ("RFC 1907"), and further in view of Management Information Base for Network Management of TCP/IP-based internets ("RFC 1213")

In the Final Office Action, the Examiner rejected claims 1-5, 7-8, and 10-11 as being unpatentable over Aoyagi et al. in view of RFC 1907 and further in view of RFC 1213.

It is submitted that the Examiner failed to establish a prima facie case of obviousness because the references, either alone or in combination, do not teach or suggest all the features of at least independent claims 1 and 10-11 and because the Examiner has not provided a proper motivation to combine the references.

Claim 1 recites "if the network component is a management-capable network component, determining whether the network component supports layer 3 of the OSI reference model and determining whether data packets have already been forwarded in the past between the interfaces of the management-capable network component in order to classify the management-capable network component." In other words, the invention of claim 1 provides for executing two separate and distinct queries for the purpose of properly classifying a management-capable network component. Claim 1 provides both a query as to whether the network component supports layer 3 of the OSI reference model (for example, via the managed object "sysServices") and a query as to whether data packets have already been forwarded in the past between the interfaces of the management-capable network component (for example, via the managed object "ipForwDatagrams"). Generally, a problem can arise in which an originally intended query (via the managed object "sysServices") to classify management-capable network components cannot be trusted because incorrect information might be returned by the network components. However, the invention of claim 1 prevents this problem by executing an additional query (for example, via the managed object "ipForwDatagrams") in order to classify the management-capable network component.

In the Final Office Action, the Examiner acknowledges that Aoyagi et al. does not teach determining whether or not packets have already been forwarded and determining whether the network component supports layer 3 of the OSI reference model. The Examiner attempts to make up for this deficiency in Aoyagi et al. with reference to RFC 1907 and RFC 1213. However, it is submitted the neither RFC 1907 nor RFC 1213 discuss or suggest these features of claim 1.

RFC 1907 and RFC 1213 are "Request for Comments" technical papers that merely define the objects "sysServices" and "ipForwDatagrams". However, neither RFC 1907 nor RFC 1213 disclose the inventive steps of claim 1, which include determining whether the network component supports layer 3 of the OSI reference model and determining whether data packets have already been forwarded in the past between the interfaces of the management-capable network component for the purpose of properly classifying a management-capable network component. Therefore, neither RFC 1907 nor RFC 1213, alone or in combination, teach "if the network component is a management-capable network component, determining whether the network component supports layer 3 of the OSI reference model and determining whether data packets have already been forwarded in the past between the interfaces of the management-

capable network component in order to classify the management-capable network component,” as recited in claim 1.

Furthermore, the Examiner’s motivation for combining the references is not proper. The Examiner indicates that it would have been obvious to use an ipForwDatagrams MIB object in the invention of Aoyagi et al. to give a strong indication the device may be categorized as a router and that it would have been obvious to use a sysServices MIB object in the invention of Aoyagi et al. to enable devices connected to a network to be classified by service type. However, sysServices, per its own definition, would be sufficient to classify network components, such that it would not be obvious to one skilled in the art to further include a step of determining whether data packets have already been forwarded in the past between the interfaces of the management-capable network component for the purpose of properly classifying a management-capable network component. Also, the Examiner’s motivation is based on hindsight knowledge, as ipForwDatagrams only provides information regarding forwarded datagrams. Therefore, the use of ipForwDatagrams for categorizing network components clearly requires knowledge of the invention of claim 1 and, therefore, is based on the hindsight knowledge of the Applicants’ disclosure.

Aoyagi et al. provides no motivation for determining whether data packets have already been forwarded in the past as an indication for a classification of network components. Also, the teaching or suggestion to make the claimed combination must be found in the prior art, and not be based on applicant’s disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991). See M.P.E.P. § 2142. Thus, as the Examiner has relied upon the motivations of “to give a strong indication the device may be categorized as a router” and “to enable devices connected to a network to be classified by service type,” which are quoted directly from the applicants’ disclosure (see paragraphs [0030]-[0033] of the specification), the Examiner has failed to establish a *prima facie* case of obviousness.

Since none of the references cited, alone or in combination, discuss or suggest all of the features of independent claim 1, and there is no proper motivation to combine these references, claim 1 patentably distinguishes over the cited prior art. Claims 2-5 and 7-8 depend from claim 1 and, therefore, are patentable over the cited prior art for at least the same reasons as claim 1.

It is submitted that the Examiner failed to establish a *prima facie* case of obviousness because the references, either alone or in combination, do not teach or suggest all the features of claim 10 and because the Examiner has not provided a proper motivation to combine the

references.

Claim 10 recites a central management component that includes "a classification unit to determine whether the network component supports layer 3 of the OSI reference model and determine whether data packets have already been forwarded in the past between the interfaces of the management-capable network component in order to classify the management-capable network component, if the network component is a management-capable network component."

Therefore, since none of the references cited, alone or in combination, discuss or suggest all of the features of independent claim 10, and there is no proper motivation to combine these references, claim 10 patentably distinguishes over the cited prior art.

It is submitted that the Examiner failed to establish a prima facie case of obviousness because the references, either alone or in combination, do not teach or suggest all the features of claim 11 and because the Examiner has not provided a proper motivation to combine the references.

Claim 11 recites a computer readable storage medium storing a computer program to control a processor to perform a method for classifying network components of a packet-oriented network that includes "if the network component is a management-capable network component, determining whether the network component supports layer 3 of the OSI reference model and determining whether data packets have already been forwarded in the past between the interfaces of the management-capable network component in order to classify the management-capable network component."

Therefore, since none of the references cited, alone or in combination, discuss or suggest all of the features of independent claim 11, and there is no proper motivation to combine these references, claim 11 patentably distinguishes over the cited prior art.

C. Claim 6 is patentable over Aoyagi et al. as modified by RFC 1907 and RFC 1213 as applied to claim 5, and further in view of U.S. Patent No. 5,651,006 ("Fujino et al.")

In the Final Office Action, the Examiner rejected claim 6 as being unpatentable over Aoyagi et al. as modified by RFC 1907 and RFC 1213 as applied to claim 5, and further in view of Fujino et al.

It is submitted that the Examiner failed to establish a prima facie case of obviousness because the references, either alone or in combination, do not teach or suggest all the features

of claim 6 and because the Examiner has not provided a proper motivation to combine references.

Fujino et al. has been cited by the Examiner merely as an example of determining whether a network component is a switch or a host and fails to make up for the deficiencies in the combination of Aoyagi et al. as modified by RFC 1907 and RFC 1213 with respect to claim 1, as discussed above. Claim 6 depends from claim 1 and, therefore, is patentable over the cited prior art for at least the same reasons as claim 1.

Therefore, since none of the references cited, alone or in combination, discuss or suggest all of the features of claim 6, and there is no proper motivation to combine these references, claim 6 patentably distinguishes over the cited prior art.

D. Claim 9 is patentable over Aoyagi et al. in view of RFC 1907 and RFC 1213 as applied to claim 1, and further in view of Fujino et al.

In the Final Office Action, the Examiner rejected claim 9 as being unpatentable over Aoyagi et al. in view of RFC 1907 and RFC 1213 as applied to claim 1, and further in view of Fujino et al.

It is submitted that the Examiner failed to establish a prima facie case of obviousness because the references, either alone or in combination, do not teach or suggest all the features of claim 9 and because the Examiner has not provided a proper motivation to combine references.

Fujino et al. has been cited by the Examiner merely as an example of determining whether a network component is a switch or a host and fails to make up for the deficiencies in the combination of Aoyagi et al. as modified by RFC 1907 and RFC 1213 discussed above. Claim 9 depends from claim 1 and, therefore, is patentable over the cited prior art for at least the same reasons as claim 1.

Therefore, since none of the references cited, alone or in combination, discuss or suggest all of the features of claim 9, and there is no proper motivation to combine these references, claim 9 patentably distinguishes over the cited prior art.

E. CONCLUSION

In summary, Applicants submit that claims 1-11 patentably distinguish over the prior art.

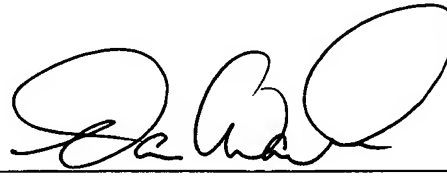
Reversal of the Examiner's rejection is respectfully requested.

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Respectfully submitted,

STAAS & HALSEY LLP

Date: 9-30-08

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VIII. CLAIMS APPENDIX (37 C.F.R. § 41.37(c)(1)(viii))

What is claimed is:

1. A method for classifying network components of a packet-oriented network, comprising:
determining, from a central management component, whether a network component is a management-capable network component; and
if the network component is a management-capable network component, determining whether the network component supports layer 3 of the OSI reference model and determining whether data packets have already been forwarded in the past between the interfaces of the management-capable network component in order to classify the management-capable network component.
2. The method according to claim 1, wherein
a management agent unit is provided in each network component that is a management-capable network component, and
the management agent unit enables communication between the central management component and the management-capable network component.
3. The method according to claim 2, wherein communication between the central management component and the management agent unit takes place according to an SNMP protocol.
4. The method according to claim 1, wherein the network component is classified as a host, a router or a switch.
5. The method according to claim 4, further comprising:
if the network component supports layer 3 and data packets have already been forwarded, classifying the network component as a router.
6. The method according to claim 5, wherein

if the network component does not support layer 3 and/or the network component has not already forwarded data packets, then ports of the network component are counted, if the number of ports is greater than 1, the network component is classified as a switch, and if the number of ports is not greater than 1, then the network component is classified as a host.

7. The method according to claim 5, wherein the network component has a management information base with managed objects, and whether the network component supports layer 3 and whether data packets have already been forwarded are determined by an interrogation of the managed objects.

8. The method according to claim 7, wherein the management information base is administered by a management agent unit provided in the network component.

9. The method according to claim 1, further comprising, if the network component is not a management-capable network component, presuming that the network component is a host.

10. A central management component, comprising:
an inquiry unit to determine, whether a network component is a management-capable network component; and
a classification unit to determine whether the network component supports layer 3 of the OSI reference model and determine whether data packets have already been forwarded in the past between the interfaces of the management-capable network component in order to classify the management-capable network component, if the network component is a management-capable network component.

11. A computer readable storage medium storing a computer program to control a processor to perform a method for classifying network components of a packet-oriented network, the method comprising:

determining, from a central management component, whether a network component is a management-capable network component; and

if the network component is a management-capable network component, determining whether the network component supports layer 3 of the OSI reference model and determining whether data packets have already been forwarded in the past between the interfaces of the management-capable network component in order to classify the management-capable network component.

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IX. EVIDENCE APPENDIX (37 C.F.R. § 41.37(c)(1)(ix))

Not applicable

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X. RELATED PROCEEDING APPENDIX (37 C.F.R. § 41.37(c)(1)(x))

Not applicable